

- (d) downloading, by the server process, the further segment of the file;
- and
- (e) repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network.

### Remarks

The Office Action sets forth six different obviousness rejections. Claims 1-8 and 14-27 stand rejected under § 103(a) over U.S. Patent No. 5,913,040 to Rakavy et al. ("Rakavy") in view of U.S. Patent No. 5,898,673 to Riggan et al. ("Riggan"). Dependent claim 9 is rejected under § 103(a) over Rakavy in view of Riggan, and further in view of Official Notice taken by the Examiner. Dependent claims 10 and 11 are rejected under § 103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,285,662 to Watanabe et al. ("Watanabe"). Dependent claim 12 stands rejected under § 103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,427,169 to Elzur et al. ("Elzur"). Dependent claim 13 is rejected under § 103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,427,169 to Kalkunte et al. ("Kalkunte"). Finally, independent claim 28 stands rejected under § 103(a) over U.S. Patent No. 6,463,468 to Buch et al. ("Buch") in view of Rakavy in view of Riggan. For the reasons stated below, Applicant traverses the foregoing rejections and respectfully submits that claims 1-28 are patentable over the prior art.

Addressing initially the rejection of claims 1-8 and 14-27, independent claims 1, 22 and 25 are patentable over the combination of Rakavy and Riggan because each independent claim includes a limitation relating to the calculation of a threshold

level of utilization as a function of a maximum monitored level of actual network bandwidth utilization. As explained below, these claim limitations are neither taught nor suggested by the proposed combination of Rakavy and Riggan.

Independent claim 1 requires monitoring the level of actual network bandwidth utilization, identifying a maximum monitored level of actual utilization, calculating a threshold level of utilization as a function of the maximum monitored level of utilization, and, if the actual level is less than the threshold level, receiving at least a portion of the set of data over the network. In contrast, Rakavy discloses a method for downloading data in the background without interfering with a user's other network activity by monitoring the percentage of time the network connection is busy over a given time period and only downloading data when the line utilization is below a predetermined threshold. While Rakavy's method and Applicant's claimed invention address essentially the same problem, Applicant's claimed invention provides a substantial advantage over Rakavy's solution in that it optimizes the use of network bandwidth. By contrast, Rakavy's solution is less effective because downloading data based on the percentage of time the network connection is busy will often result in underutilization of the network bandwidth (as explained in Applicant's specification at page 16, line 18 through page 17, line 1).

At page 12 of the Office Action, it is noted that Rakavy monitors the current line utilization (e.g., bytes/second). Even so, Applicant is not claiming that monitoring current line utilization is new in and of itself. Rather, Applicant claims that the method of claim 1 is new. Despite addressing essentially the same problem, Rakavy teaches away from Applicant's claimed invention because Rakavy teaches that data

should only be transferred during periods of low line utilization (Rakavy, column 13, lines 11-12), which "occurs when the communications line is busy no more than a predetermined percentage of time" (Rakavy, column 13, lines 35-36). Rakavy's approach does not involve calculating a threshold level of utilization as a function of a maximum monitored level of utilization as in claim 1. Rather, Rakavy teaches a different approach based on the percentage of time the network connection is busy, and Rakavy's approach is a less effective one for the reasons stated above and in Applicant's specification at page 16, line 18 through page 17, line 1. Thus, Applicant's claimed invention advances the state of the art beyond what is taught by Rakavy.

Moreover, the Office Action acknowledges that Rakavy fails to disclose multiple limitations of claim 1. Specifically, the Office Action admits at page 3 that "Rakavy does not disclose identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as function of the maximum monitored level of utilization." The Office Action attempts to overcome the deficiencies of Rakavy's disclosure by combining it with the teaching in Riggan. However, Riggan is not properly combinable with Rakavy and -- in any event -- does not disclose the claim limitations that are missing from Rakavy. Accordingly, claim 1 is patentable over the combination of Rakavy and Riggan as explained more fully below.

Riggan is non-analogous art *with respect to Applicant's invention*, and thus Riggan is not properly combinable with Rakavy. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24

USPQ2d 1443, 1445 (Fed. Cir. 1992). Despite correctly stating the test for non-analogous art at page 12 of the Office Action (i.e., whether Riggan is in the field of *Applicant's* endeavor or reasonably pertinent to the particular problem with which *Applicant* was concerned), the Office Action concludes that Riggan and the primary reference Rakavy are analogous art. Whether or not two references are analogous art is irrelevant. As explained below, Riggan is non-analogous art *with respect to Applicant's invention*.

Riggan is directed to a solution for prevention of cell loss due to quality of service contracts in an ATM (Asynchronous Transfer Mode) network. Using ATM, different traffic types received in various user formats are segmented into fixed length cells that are transported to and reassembled into the original format at the destination node. Traffic management contracts between an ATM user and the network provider specify the quality of service (QoS) the ATM user can expect, including an amount of guaranteed bandwidth. When a user exceeds the agreed-upon bandwidth, the excess cells are liable to be discarded if the network is congested. Thus, users are typically required to pay for a larger bandwidth allocation, which can be relatively expensive. To prevent cell loss, Riggan defines a QoS threshold relative to the QoS bandwidth limit provided for by contract. Clearly, Riggan is not in the field of *Applicant's* endeavor. Moreover, *Applicant* was concerned with the problem of downloading data in the background without interfering with a user's other network activity, not with preventing cell loss in an ATM network. Since Riggan is also not reasonably pertinent to the particular problem with which *Applicant* was concerned, Riggan cannot be properly relied upon as a basis for rejecting claim 1.

Even if Riggan were analogous art, there is no suggestion from the prior art to combine its teaching with the teaching of Rakavy. In any event, combining the teachings of Rakavy and Riggan would merely provide a method for negotiating a maximum bandwidth and arbitrarily setting a threshold at or below the negotiated bandwidth. There is no teaching in either reference to identify a maximum monitored level of actual utilization and to calculate a threshold level as a function of the maximum monitored level of utilization. Therefore, the proposed combination of Rakavy and Riggan would not achieve the method of claim 1. There is also no suggestion from the prior art to modify Rakavy, Riggan or the combination of Rakavy and Riggan to achieve the method of claim 1. For at least the reasons stated above, Applicant respectfully submits that independent claim 1 patentably distinguishes over Rakavy and Riggan, taken either individually or in combination.

Independent claim 22, which is directed to a data structure stored on a computer-readable medium, recites "wherein said second data field is derived from said first data field by calculating the threshold level as a function of the maximum monitored level." Similarly, independent claim 25 is directed to a computer-readable medium having computer-executable components including "a threshold calculating component which calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by said bandwidth monitoring component." Obviously these limitations are similar to the "calculating a threshold level" limitation of claim 1. Thus, for at least the reasons stated above with respect to claim 1, Applicant respectfully submits that independent claims 22 and 25 are patentable over the proposed combination of Rakavy and Riggan.

Dependent claims 2-21, 23-24 and 26-27 are likewise patentable over the combination of Rakavy and Riggan for at least the reasons stated above with respect to their respective base claims 1, 22 and 25. Furthermore, many of the dependent claims are separately patentable because they contain additional limitations not found in either Rakavy or Riggan. For example, in claims 5, 23 and 27 the threshold level is a predetermined percentage of the maximum monitored level. Neither Rakavy nor Riggan teach or suggest the limitations of claims 5, 23 and 27 in the context of their respective base claims 1, 22 and 25. As discussed below, dependent claims 9-13 are also the subject of additional rejections based on additional prior art references.

Dependent claim 9 is directed to a method including "incrementing a counter each time a discrete portion of the data is received over the network." The Office Action takes "Official Notice" that incrementing a counter each time a portion of data is received is well known in the art and contends that it would have been obvious to one of ordinary skill in the art combine this well known concept with the combined teachings of Rakavy and Riggan. However, as pointed out above, Rakavy and Riggan cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine the Official Notice with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 9. Accordingly, Applicant submits that claim 9 is patentable over the proposed combination of Rakavy, Riggan and the Official Notice.

Dependent claims 10 and 11 are patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claims 10 and 11 are

separately rejected over the combination of Rakavy, Riggan and Watanabe. However, as pointed out above, Rakavy and Riggan cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Watanabe with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claims 10 and 11. Accordingly, Applicant submits that claims 10 and 11 are patentable over the proposed combination of Rakavy, Riggan and Watanabe.

Dependent claim 12 is patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claim 12 is separately rejected over the combination of Rakavy, Riggan and Elzur. Elzur, which relates to parsing a packet header, is non-analogous art and thus cannot properly be relied on to reject claim 12 because it is neither in the field of Applicant's endeavor nor is it reasonably pertinent to the particular problem with which the Applicant was concerned. Rakavy, Riggan and Elzur cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Elzur with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 12. Accordingly, Applicant submits that claim 12 is patentable over the proposed combination of Rakavy, Riggan and Elzur.

Dependent claim 13 is patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claim 13 is separately rejected over the combination of Rakavy, Riggan and Kalkunte. Like Riggan and Elzur, Kalkunte is non-analogous art and thus cannot properly be relied on to reject claim 13. Kalkunte,

which relates to a method for selectively modifying collision delay intervals based on a detected capture effect in a half-duplex network, is neither in the field of Applicant's endeavor nor is it reasonably pertinent to the particular problem with which the Applicant was concerned. Rakavy, Riggan and Kalkunte cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Kalkunte with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 13. Accordingly, Applicant submits that claim 13 is patentable over the proposed combination of Rakavy, Riggan and Kalkunte.

Finally, independent claim 28 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Buch in view of Rakavy in view of Riggan. Buch discloses a technique for free Internet access which involves a method for downloading video advertising files when a user is not actively using the bandwidth of the Internet connection. As shown in FIG. 11 and described at column 12, Buch's method determines the ad block size based on the available data rate and perhaps also based on system resources. If the Internet connection is being used (e.g., to download content or to send/receive email), the method checks the availability of the connection again later. However, if the Internet connection is not being used, a request is sent to the ad server for information such as the file name, the offset from the file start where the block should be downloaded, and the determined ad block size. As discussed below, claim 28 is patentable over the proposed combination of Buch, Rakavy and Riggan.

Independent claim 28 recites: "the actual network bandwidth utilization is less than a threshold level below which data may be transferred over the network without



interfering with other network activity, wherein the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization." The Office Action admits at page 11 that "Buch does not disclose that the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization," and thus the Office Action relies on Rakavy in view of Riggan for the missing limitation. However, the missing limitation of claim 28 is similar to the corresponding language in independent claims 1, 22 and 25, so claim 28 is patentable over the combination of Rakavy and Riggan for at least the reasons discussed above with respect to claims 1, 22 and 25. Furthermore, while the Office Action purports to rely on Rakavy in view of Riggan for the missing limitation, page 3 of the Office Action admits that Rakavy also fails to disclose this same limitation. Consequently, Riggan is the sole basis in the Office Action for the missing limitation of claim 28. Applicant respectfully submits that Riggan does not disclose that the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization as recited in claim 28.

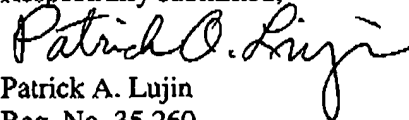
It should be noted that Buch, Rakavy and Riggan are not properly combinable with one another. For the reasons stated above with respect to claims 1, 22 and 25, Rakavy and Riggan are not properly combinable. Similarly, Buch is not properly combinable with either Rakavy or Riggan because there is no teaching or suggestion from the prior art to do so. Accordingly, claim 28 is patentable over the proposed combination of Buch, Rakavy and Riggan on the additional ground that the references are not properly combinable.

In any event, there is no teaching in Buch, Rakavy or Riggan -- taken either individually or in combination -- to calculate a threshold level as a function of a maximum monitored level of utilization as required by claim 28. Therefore, the proposed combination of Buch, Rakavy and Riggan would not achieve the method of claim 28. Moreover, there is no suggestion from the prior art to modify the combined teachings of Buch, Rakavy and Riggan to achieve the method of claim 28. For at least the reasons stated above, Applicant respectfully submits that independent claim 28 patentably distinguishes over Buch, Rakavy and Riggan, taken either individually or in combination.

### Conclusion

For the reasons stated above, claims 1-28 are in condition for allowance. Applicant respectfully requests withdrawal of the pending rejections and allowance of claims 1-28. If any issues remain which would prevent issuance of this application, the Examiner is urged to contact the undersigned prior to issuing a subsequent action. The Commissioner is hereby authorized to charge any additional amount required, or credit any overpayment, to Deposit Account No. 19-2112.

Respectfully submitted,



Patrick A. Lujin  
Reg. No. 35,260

PAL/bp  
SHOOK, HARDY & BACON L.L.P.  
One Kansas City Place  
1200 Main Street  
Kansas City, Missouri 64105-2118  
816/474-6550